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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Manjari Kuntimaddi

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WASHINGTON, DC 20006

EXAMINER

HUNTER, ALVIN A

ART UNIT

PAPER NUMBER

3711

MAIL DATE

DELIVERY MODE

06/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/833,667

Applicant(s)

KUNTIMADDI ET AL.

Examiner

Alvin A. Hunter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 8-26, 30, 39 and 43-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-26, 30, 39 and 43-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 46 and 47 been renumbered 45 and 46.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimosaka (USPN 5816937) in view of Lucas (USPN 5866258).

Regarding claim 1, Shimosaka discloses a golf ball having a core and a cover and at least a layer between the cover and core wherein a layer covering the core is formed of polyurethane. Shimosaka does not disclose the polyurethane being a IPN. Lucas discloses a interpenetrating polymer network formed of polyurethane. One having ordinary skill in the art would have found it obvious to have a layer covering the cover made of a polyurethane IPN, as taught by Lucas, in order to improve strength.

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Regarding claim 2, Shimosaka discloses an intermediate layer. Regarding claim 4, see the above regarding claim 1.

Regarding claim 18, Shimosaka discloses the core being fluid filled (See Figure 3).

Regarding claim 19, Shimosaka also notes that a wound layer may surround the center.

Claims 24-26, 30, 39, and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimosaka (USPN 5816937) in view of Blahak et al. (USPN 4631319).

Regarding claims 24, 30, and 39, Shimosaka discloses a golf ball having a core and a cover and at least a layer between the cover and core wherein a layer covering the core is formed of polyurethane. Shimosaka does not disclose the polyurethane being an IPN. Blahak et al. discloses composition comprising a homopolymer or copolymer including an uretdione group (dimer) wherein the composition can be used to make an interpenetrating polymer network such as those listed in column 10, lines 60 through 68. Shimosaka notes that the material for the layer is not critical although polyurethanes, ionomer, etc are well known ones. One having ordinary skill in the art would have found it obvious to have a layer covering the cover made of an IPN having an uretdione group, as taught by Blahak et al., in order to improve strength.

Regarding claim 25 and 26, Shimosaka et al. discloses the cover and intermediate layers made of materials from the same group. Noting that regarding claim 24, one having ordinary skill in the art would have found it obvious to have any of the layers be an IPN so long as strength is improved.

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Regarding claims 43, 45, and 46, Shimosaka et al. does not note if the material for the layers are thermoset or thermoplastic. Blahak et al. discloses that the thermoset composition can be combined with thermoplastic compositions in order to form IPNs. One having ordinary skill in the art would have found it obvious to have the layers thermoplastic and/or thermoset so long as the strength is improved.

Regarding claim 44, see the above regarding claims 30 and 43.

Claims 1-4, 8-18, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy, III et al. (USPN 6290614) in view of Frisch et al. (USPN 4742128).

Regarding claims 1 and 18, Kennedy, III et al. discloses a golf ball having a solid core and a cover and at least a layer between the cover and core wherein a layer covering the core is formed of RIM polyurethane. Kennedy, III et al. does not disclose the polyurethane being a IPN. Frisch et al. discloses an interpenetrating polymer network formed of RIM polyurethane. One having ordinary skill in the art would have found it obvious to have a layer covering the cover made of a polyurethane IPN, as taught by Frisch et al., in order to improve strength.

Regarding claim 2, Kennedy, III et al. notes that the core, intermediate layer, or cover can be made of a RIM polyurethane. In combination with Frisch et al., one having ordinary skill in the art would find it obvious to have any of these layers to be made of a IPN in order to improve strength.

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Regarding claim 3, Kennedy, III et al. discloses the cover having a hardness greater than 15 Shore A and the golf ball having a COR greater than 0.7 See (examples).

Regarding Claim 4, see the above regarding claim 1.

Regarding claim 8, see the above regarding claim 1. Further, Frisch et al. notes that the RIM polyurethane composition may be a semi-IPN.

Regarding claim 9, Kennedy, III et al. notes that the core, intermediate layer, or cover can be made of a RIM polyurethane. In combination with Frisch et al., one having ordinary skill in the art would find it obvious to have any of these layers to be made of a semi-IPN in order to improve strength.

Regarding claims 10-17, see the above regarding claim 1. Further, the additional limitations regarding the glass transition temperature, phase size, and melting exotherm are presumed to naturally flow from the prior art being that the office does not have the ability to compare these limitations through testing.

Regarding claim 21, Kennedy, III et al. discloses the cover having an inner and outer cover (See Figure 3).

Regarding claim 22 and 23, see the above regarding claim 1 Further, it is submitted that that shear category is at least one less than that of which is free of an IPN being that the composition has improved strength.

Response to Arguments

Applicant's arguments filed 3/12/07 have been fully considered but they are not persuasive. Applicant argues that Frisch does not teach the RIM reacting within the

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mold within 60 seconds and cannot be combined with Kennedy et al. The examiner disagrees. According to Frisch et al., the goal of the RIM process is to react rapidly in order to produce small objects (See background of the invention). This argument is not persuasive. Applicant also argues that there is no motivation to combine Lucas with Shimosaka. The examiner disagrees. Lucas discloses an IPN suitable for coating a substrate. If not mistaken, the intermediate layer is a coating over a core substrate; therefore, Lucas in combination with Shimosaka would be analogous.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is 571-272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene Kim, can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alvin A. Hunter, Jr.



EUGENE KIM
SUPERVISORY PATENT EXAMINER